

Serial No. 09/884,274

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Reply to the Office Action dated November 30, 2005

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (previously presented): An RF module comprising;
a multi-layered substrate having first and second sides;
a base-band IC, a memory IC and an RF-IC, said base-band IC and memory IC being mounted on the first side of said multi-layered substrate, and said RF-IC being mounted on the second side of said multi-layered substrate;
an RF passive component incorporated in said multi-layered substrate; and
a wiring pattern incorporated in said multi-layered substrate, said wiring pattern interconnecting said base-band IC and said memory IC; and
a shielding ground electrode pattern interposed between the first side of said multi-layered substrate on which said base-band IC and said memory IC are mounted and the second side of said multi-layered substrate on which said RF-IC is mounted.

Claim 2 (original): An RF module according to Claim 1, further comprising an antenna incorporated in said multi-layered substrate.

Claim 3 (original): An RF module according to Claim 1, wherein at least one of said base-band IC, said memory IC and said RF-IC is a bare chip.

Claim 4 (original): An RF module according to Claim 3, wherein at least one cavity is formed in a portion of said multi-layered substrate, and said bare chip is disposed in said at least one cavity.

Claim 5 (canceled).

Claim 6 (previously presented): An RF module according to Claim 1, wherein the shielding ground electrode pattern is interposed between the first side of said multi-layered substrate on which said base-band IC and said memory IC are mounted and said RF passive component incorporated in said multi-layered substrate.

Claim 7 (original): An RF module according to Claim 1, further comprising at least one trimming electrode pattern disposed on a surface of said multi-layered substrate and arranged to enable adjustment of frequency characteristics of the RF module.

Claim 8 (currently amended): An RF module according to Claim 4, wherein said RF-IC is a bare chip; ~~said RF module further comprising:~~
~~a said shielding ground electrode pattern is arranged to prevent RF signal radiation provided within said multi-layered substrate at a location on the a bottom surface of said bare chip, so as to prevent unnecessary radiation of RF signals from said RF-IC; and~~

a plurality of via holes are arranged within said multi-layered substrate and around said bare chip, said via holes providing connection to said ground electrode pattern for preventing RF signal radiation.

Claim 9 (original): An RF module according to Claim 1, further comprising a metallic case disposed on said multi-layered substrate.

Claim 10 (original): An RF module according to Claim 9, wherein the metallic case is arranged to define a portion of an antenna.

Claims 11-24 (canceled).